CLAIM AMENDMENTS

Claim Amendment Summary

Claims pending

- Before this Amendment: Claims 1-5, 7, 10-15, 17, 20-25, 27, and 30.

- After this Amendment: Claims1-5, 10-15, 17, 20-23, 25, 27, and 30-34.

Canceled claims:

- Before this Amendment: Claims 6, 8, 9, 16, 18-19, 26, and 28-29.

- In this Amendment: Claims 7, 24, and 27.

Amended claims: 1, 4, 11, 12, 13, 14, 15, 17, 21, 22, 23, and 25.

New claims: 31-34.

Claims:

1. (Currently Amended) A method for algebrizing a syntax tree representation of a relational database query into a relational algebra representation, said syntax tree comprising a plurality of nodes, ~~and said algebrizing comprising a plurality of operations each of which can be performed in a single pass through said syntax tree representation, said~~ the method comprising ~~the step of~~ performing at least two operations in a single pass through ~~said~~ the syntax tree representation, wherein at least one of the ~~one of the~~

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RESPONSE TO NON-FINAL OFFICE ACTION

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operations ~~being constant folding~~ is selected from a group of operations comprising:

    table and column binding;

    aggregate binding;

    type derivation;

    constant folding;

    property derivation; and

    tree translation.

2. (Original) The method of claim 1 wherein said at least two operations are executed in a predetermined order at each of said plurality of nodes.

3. (Original) The method of claim 2 wherein

said at least two operations comprise a first operation and a second operation; and

said second operation either executes or does not execute at each of said plurality of nodes and after said first operation based on a result from said first operation.

4. (Currently Amended) The method of claim 1 wherein <u>one of </u>said at least two operations comprises ~~at least one operation from among a group of operations, said group of operations comprising: table and column binding; aggregate binding; type derivation;~~ constant folding~~; property derivation; and tree translation~~.

5. (Original) The method of claim 1 wherein said at least two operations comprises at least all operations from among a group of operations, said group of operations comprising: table and column binding; aggregate binding; type derivation; property derivation; and tree translation.

6-9. (Canceled)

10. (Original) A method for algebrizing a syntax tree representation of a relational database query into a relational algebra representation, said syntax tree comprising a plurality of nodes, and said algebrizing comprising a plurality of operations, said method comprising the inclusion of constant folding as an operation among said plurality of operations.

11. (Currently Amended) A system for algebrizing a syntax tree representation of a relational database query into a relational algebra representation, said syntax tree comprising a plurality of nodes, said system comprising:

a plurality of operations, wherein at least one of the plurality of operations is selected from a group of operations, the group of operations comprising:

table and column binding;

aggregate binding;

type derivation;

property derivation; and

tree translation; and

a subsystem for performing at least two of the plurality of operations in a single pass through said syntax tree representation, one of the operations being constant folding.

12. (Currently Amended) The system of claim 11 wherein said system executes the at least two of the plurality of operations in a predetermined order at each of said plurality of nodes during said single pass through said syntax tree representation.

13. (Currently Amended) The system of claim 12 wherein

said at least two <u>of the plurality of</u> operations comprise a first operation

and a second operation;

said subsystem executes said first operation before said second operation

at each of said plurality of nodes, and receives a result from said first operation

at each of said plurality of nodes; and

said subsystem either executes or does not execute said second operation

at each of said plurality of nodes, on a node by node basis, based on a result

from said first operation.

14. (Currently Amended) The system of claim 11 wherein <u>each of</u> said

at least two <u>of the plurality of</u> operations <u>are selected from the</u> ~~comprises at~~

~~least one operation from among a~~ group of operations~~, said group of operations~~

~~comprising: table and column binding; aggregate binding; type derivation;~~

~~constant folding; property derivation; and tree translation~~.

15. (Currently Amended) The system of claim 11 wherein said at least two ~~of the plurality of~~ operations comprises at least all ~~of the group of~~ operations ~~from among a group of operations, said group of operations comprising: table and column binding; aggregate binding; type derivation; property derivation; and tree translation.~~

16. (Canceled)

17. (Currently Amended) The system of claim 11 wherein said algebrizing comprises <u>one or more of</u>:

~~at least one operation from among a group of operations, said group of operations comprising:~~ table and column binding;

aggregate binding;

type derivation;

constant folding;

property derivation; ~~and~~<u>or</u>

tree translation.

18. (Canceled)

19. (Canceled)

20. (Original) A system for algebrizing a syntax tree representation of a relational database query into a relational algebra representation, said syntax tree comprising a plurality of nodes, said system comprising:

a plurality of operations; and

constant folding as an operation among said plurality of operations.

21. (Currently Amended) A computer-readable medium comprising computer-readable instructions for algebrizing a syntax tree representation of a relational database query into a relational algebra representation, said syntax tree comprising a plurality of nodes, ~~and said algebrizing comprising a plurality of operations each of which can be performed in a single pass through said syntax tree representation,~~ said computer-readable instructions comprising instructions for performing ~~at least two operations in a single pass through~~ constant folding on said syntax tree representation~~, one of the operations being constant folding~~.

22. (Currently Amended) The computer-readable instructions of ~~claim 21~~ claim 34, further comprising instructions for <u>performing the plurality of at</u> ~~least two~~ operations ~~to be executed~~ in a predetermined order at each of said plurality of nodes.

23. (Currently Amended) The computer-readable instructions of claim 22, <u>wherein the plurality of operations</u> ~~further comprising instructions for~~

~~at least two operations to~~ comprise a first operation and a second operation; and <u>wherein the computer-readable instructions further comprises</u> <u>instructions for</u> executing or not executing said second operation at each of said plurality of nodes after said first operation has executed based on a result from said first operation.

24. (Canceled)

25. (Currently Amended) The computer-readable instructions of ~~claim 21~~ claim 34, wherein the plurality of operations ~~further comprising instructions whereby said at least two operations~~ comprises at least all operations from among ~~a~~ the group of operations~~, said group of operations comprising: table and column binding; aggregate binding; type derivation; property derivation; and tree translation.~~

26-29. (Canceled)

30. (Original) A computer-readable medium comprising computer-readable instructions for algebrizing a syntax tree representation of a relational database query into a relational algebra representation, said syntax tree comprising a plurality of nodes, and said algebrizing comprising a plurality of operations, said computer-readable instructions comprising instructions for constant folding as an operation among said plurality of operations.

31. (New) The method of claim 5 wherein said group of operations further comprises constant folding.

32. (New) The system of claim 11 wherein said group of operations further comprises constant folding.

33. **(New)** The system of claim 15 wherein said group of operations further comprises constant folding.

34. **(New)** The computer-readable instructions of claim 21 further comprising instructions for performing a plurality of operations in a single pass through the syntax tree representation, wherein at least one of the plurality of operations is selected from a group of operations comprising: table and column binding, aggregate binding, type derivation, property derivation, constant folding, and tree translation.